

## WHAT IS CLAIMED IS:

- 1. A method of diagnosing lipodystrophy in a body region in a test subject in vivo comprising measuring the temperature of the body region using infrared thermography, a raise in temperature relative to the same body region in a normal subject indicating the presence of lipodystrophy in the subject.
- 2. The method of claim 1, wherein the body region is the face.
- 3. The method of claim 1, wherein the body region is the back of the neck.
- 4. The method of claim 1, wherein the subject is HIV-positive.
- 5. The method of claim 1, wherein the patient has previously been treated with protease inhibitors.
- 6. A method of monitoring the dyslipidemic effect of treatment with a drug therapy in a subject comprising monitoring the body temperature of the subject during drug therapy using infrared thermography, a raise in the

temperature of the subject relative to an earlier measurement of the subject indicating a dyslipidemic effect.

- 7. The method of claim 6, wherein the drug therapy is treatment with a protease inhibitor.
- 8. The method of claim 6, wherein the body region is the face or the back of the neck.
- 9. A method of determining the temperature of internal tissues or organs of a subject comprising replacing a portion of the skin of the subject in a region of the body in proximity to the tissue or organ with an infrared-invisible polymer and measuring the temperature of the region of the tissue or organ using infrared thermography.
- 10. The method of claim 9, wherein the temperature determining is used to measure the temperature before and after administration of a test agent to the animal, and wherein a difference in temperature resulting from the administration of a test agent indicates that the test agent had a thermodynamic effect on the tissue or organ.
- 11. The method of claim 10, wherein one or more dosages of the test agent are administered and the temperature of the organ for each dose is determined.
- 12. The method of claim 10, wherein temperature is measured at one or more time points after administration of the test agent.

and 5

WE!